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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,021	03/24/2004	Ryo Edo	1232-5355	7807
27123	7590	10/24/2006	EXAMINER	
MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			PHAM, MINH CHAU THI	
			ART UNIT	PAPER NUMBER
			1724	

DATE MAILED: 10/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/809,021

Applicant(s)

EDO, RYO.

Examiner

Minh-Chau T. Pham

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 13-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-11 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita et al (5,914,493), in view of Nanbu et al (5,725,664).

Morita et al disclose a substrate processing apparatus (Figs. 5 & 6) comprising an exposure chamber in which pressure of atmosphere is reduced to a first pressure (Fig. 5, 21, col. 4, lines 28-50), and an exposure unit (col. 4, lines 35-40) for transferring a pattern to a substrate is arranged, a load-lock chamber (23) connected to the exposure chamber, a transfer unit (col. 6, lines 19-22) which transfers the substrate to be exposed from a substrate carrier (29), supported by a carrier support (structure where the carrier rests, not numbered in Fig. 5) located out of the load-lock chamber (23) and the exposure chamber, into the load-lock chamber, wherein transfer of the substrate by transfer unit is performed under a second pressure higher than the first pressure. Between each chambers (25, 26, 25 and 23) transfer of the substrate is performed under a second pressure higher than the first pressure, as the substrate has not yet entered the load lock chamber, which is where pressure is first reduced. Claims 1-11 and 13-15 differ from the disclosure of Morita et al in that there is a dehumidifying unit supplying dehumidified gas into the load-lock chamber. Nanbu et al disclose a semiconductor wafer processing apparatus having a localized humidifier arranged on the circulation line to supply dehumidifying air to the chamber via dehumidifying inlet port (67) formed in the ceiling of chamber (42), a dehumidified air supply duct (69a)

supplies dehumidified air from the outside into a dehumidified air supply duct (68) coupled to the dehumidified air inlet port (67) through a filter (69) (ULPA filter) (see 67 & 69 in Fig. 4, col. 11, line 48 through col. 12, line 45). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a dehumidifying unit supplying dehumidified air as taught by Nanbu et al into the load-lock of Morita et al in order to prevent the wafer being degraded by moisture absorption thereby keeping a predetermined humidity (see col. 12, lines 31-32).

***Response to Amendment***

Applicant's arguments filed on August 14, 2006 have been fully considered but they are not persuasive.

Applicant argues that the primary reference "Morita et al does not teach or suggest a dehumidifying unit supplying dehumidified gas into the load-lock chamber". The Examiner still maintains Morita et al as the primary reference for the 103(a) rejections of claims 1-11 and 13-15 to show: A substrate processing apparatus (Figs. 5 & 6) comprising an exposure chamber in which pressure of atmosphere is reduced to a first pressure (Fig. 5, 21, col. 4, lines 28-50), and an exposure unit (col. 4, lines 35-40) for transferring a pattern to a substrate is arranged, a load-lock chamber (23) connected to the exposure chamber, a transfer unit (col. 6, lines 19-22) which transfers the substrate to be exposed from a substrate carrier (29), supported by a carrier support (structure where the carrier rests, not numbered in Fig. 5) located out of the load-lock chamber (23) and the exposure chamber, into the load-lock chamber, wherein transfer of the substrate by transfer unit is performed under a second pressure higher than the

Art Unit: 1724

first pressure, as claimed. Between each chambers (25, 26, 25 and 23) transfer of the substrate is performed under a second pressure higher than the first pressure, as the substrate has not yet entered the load lock chamber, which is where pressure is first reduced, as claimed.

The Examiner newly introduces Nanbu et al as the secondary reference in combination with Morita et al to show: A semiconductor wafer processing apparatus having a localized humidifier arranged on the circulation line to supply dehumidifying air to the chamber via dehumidifying inlet port (67) formed in the ceiling of chamber (42), a dehumidified air supply duct (69a) supplies dehumidified air from the outside into a dehumidified air supply duct (68) coupled to the dehumidified air inlet port (67) through a filter (69) (ULPA filter) (see 67 & 69 in Fig. 4, col. 11, line 48 through col. 12, line 45), as claimed.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a dehumidifying unit supplying dehumidified air as taught by Nanbu et al into the load-lock of Morita et al in order to prevent the wafer being degraded by moisture absorption thereby keeping a predetermined humidity (see Nanbu et al, col. 12, lines 31-32).

Applicant's arguments with respect to claims 1-11 and 13-15 have been thoroughly considered but are moot in view of the new ground(s) of rejection, as discussed above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh-Chau T. Pham whose telephone number is (571)

Art Unit: 1724

272-1163. The examiner can normally be reached on Mon/Tues/Thur/Fri 7:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**Minh-Chau Pham**  
**Patent Examiner**  
**Art Unit : 1724**  
**October 20, 2006**